



541 719

(43) International Publication Date  
29 July 2004 (29.07.2004)

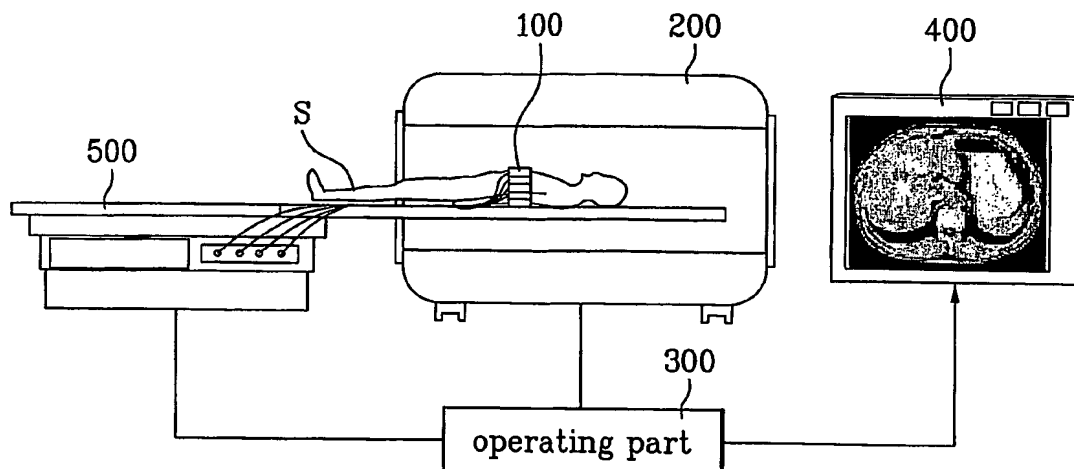
PCT

(10) International Publication Number  
**WO 2004/062464 A2**

- (51) International Patent Classification<sup>7</sup>: **A61B**
- (21) International Application Number:  
PCT/KR2003/002825
- (22) International Filing Date:  
24 December 2003 (24.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
10-2003-0001622 10 January 2003 (10.01.2003) KR  
10-2003-0041569 25 June 2003 (25.06.2003) KR
- (71) Applicant (for all designated States except US): **KOHWANG FOUNDATION, KOHWANG BOARD OF TRUSTEE** [KR/KR]; Hoegi-dong 1, Dongdaemun-gu, 130-701 Seoul (KR).
- (72) Inventors: **WOO, Eung Je** [KR/KR]; Samick Villa 106-104, Gumi-dong 121, Bundang-gu, Seongnam-si, 463-743 Gyeonggi-do (KR). **KWON, Ohin** [KR/KR]; Hanshin-Chunggu APT., 112-1502, Mok 6-dong, Yangcheon-gu, 158-751 Seoul (KR). **SEO, Jin Keun** [KR/KR]; Samhogarden Mansion Ra-308,, Banpo-dong 30-18, Seocho-gu, 137-040 Seoul (KR).
- (74) Agents: **BAHNG, Hae Cheol** et al.; Kims International Patent & Law Office, 15th Floor Yo Sam Building, 648-23, Yeoksam-dong, Kangnam-gu, Seoul 135-080 (KR).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR THREE-DIMENSIONAL VISUALIZATION OF CONDUCTIVITY AND CURRENT DENSITY DISTRIBUTION IN ELECTRICALLY CONDUCTING OBJECT



(57) Abstract: System for visualizing conductivity and current density distributions including a plurality of current injecting devices for injecting currents into a measuring object, an MRI scanner for measuring one directional component of a magnetic flux density due to each of the currents injected into a measuring object, an operating part for controlling the current injecting devices so as to inject currents of different directions into the measuring object, and calculating a conductivity distribution and a current density distribution inside of the measuring object by using the one directional component of a magnetic flux density, and displaying means for visualizing the conductivity and current density distributions calculated by the operating part, thereby permitting to visualize the conductivity and the current density of the measuring object more accurately.



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

- *without international search report and to be republished upon receipt of that report*